

We Claim:

- 1 1. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus; said
3 amplifier device having an operating current varying in generally direct proportion
4 with said supply voltage; the apparatus controlling provision of a compensating
5 current to said amplifier device to counter said varying; the apparatus comprising:
6 (a) a comparing circuit coupled with said input voltage supply locus and coupled
7 with a reference input locus; said comparing circuit effecting comparison of
8 signals received at said input voltage supply locus with signals received at said
9 reference input locus; said comparing circuit generating an output signal at an
10 output locus; said output signal indicating said comparison; and
11 (b) an output circuit coupled with said output locus and coupled with said
12 amplifier device; said output circuit generating said compensating current when
13 said output signal has a predetermined value.
- 1 2. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 1 wherein said comparing circuit comprises a first switch component and a
4 second switch component; said first switch component being coupled to respond to
5 said signals received at said input voltage supply locus; said second switch
6 component being coupled to respond to said signals received at said reference input
7 locus; at least one of said first switch component and said second switch component
8 being coupled with said output locus.
- 1 3. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 2 wherein said output circuit comprises a third switch component responsive to
4 said output signal.

- 1 4. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 1 wherein said amplifier device is a differential signal amplifier device
4 including two parallel networks handling substantially complementary differential
5 signals; said two networks being coupled with said input voltage supply locus and
6 contributing to said operating current at a common locus.
- 1 5. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 4 wherein said comparing circuit comprises a first switch component and a
4 second switch component; said first switch component being coupled to respond to
5 said signals received at said input voltage supply locus; said second switch
6 component being coupled to respond to said signals received at said reference input
7 locus; at least one of said first switch component and said second switch component
8 being coupled with said output locus.
- 1 6. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 5 wherein said output circuit comprises a third switch component responsive to
4 said output signal.
- 1 7. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 1 wherein said amplifier device comprises a plurality of amplifier units.
- 1 8. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 7 wherein said comparing circuit comprises a first switch component and a
4 second switch component; said first switch component being coupled to respond to
5 said signals received at said input voltage supply locus; said second switch

6 component being coupled to respond to said signals received at said reference input
7 locus; at least one of said first switch component and said second switch component
8 being coupled with said output locus.

1 9. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 8 wherein said output circuit comprises a plurality of third switch components;
4 each respective third switch component of said plurality of third switch components
5 being coupled with a respective amplifier unit of said plurality of amplifier units; each
6 said respective third switch component being responsive to said output signal.

1 10. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 7 wherein each respective amplifier unit of said plurality of amplifier units is a
4 differential signal amplifier unit including two parallel networks handling
5 substantially complementary differential signals; said two networks being coupled
6 with said input voltage supply locus and contributing to said operating current at a
7 common locus.

1 11. An apparatus for controlling operation of an amplifier device when supply voltage
2 provided to said amplifier device varies at an input voltage supply locus as recited in
3 Claim 10 wherein said output circuit comprises a plurality of third switch
4 components; each respective third switch component of said plurality of third switch
5 components being coupled with a respective said amplifier unit; each said respective
6 third switch component being responsive to said output signal.

1 12. An apparatus for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus; the apparatus comprising:

- 4 (a) a first control circuit coupled with said input voltage supply locus; said first
5 control circuit generating an output signal at an output locus when said supply
6 voltage decreases below said predetermined value; and
7 (b) a second control circuit coupled with said output locus and coupled with said
8 amplifier device; said second control circuit effecting said compensating in
9 response to said output signal.

1 13. An apparatus for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus as recited in Claim 12 wherein said amplifier device is a
4 differential signal amplifier device including two parallel substantially similar
5 networks handling substantially complementary differential signals; said two
6 networks being coupled with said input voltage supply locus and contributing to said
7 operating current at a common locus.

1 14. An apparatus for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus as recited in Claim 13 wherein said first control circuit
4 comprises a first switch component and a second switch component; said first switch
5 component being coupled to respond to signals received at said input voltage supply
6 locus; said second switch component being coupled to respond to signals received at a
7 reference input locus; at least one of said first switch component and said second
8 switch component being coupled with said output locus.

1 15. An apparatus for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus as recited in Claim 14 wherein said second control circuit
4 comprises a third switch component responsive to said output signal.

1 16. An apparatus for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus as recited in Claim 12 wherein said amplifier device comprises a
4 plurality of amplifier units.

1 17. An apparatus for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus as recited in Claim 16 wherein said first control circuit
4 comprises a first switch component and a second switch component; said first switch
5 component being coupled to respond to signals received at said input voltage supply
6 locus; said second switch component being coupled to respond to signals received at a
7 reference input locus; at least one of said first switch component and said second
8 switch component being coupled with said output locus.

1 18. An apparatus for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus as recited in Claim 17 wherein said second control circuit
4 comprises a plurality of third switch components; each respective third switch
5 component of said plurality of third switch components being coupled with a
6 respective amplifier unit of said plurality of amplifier units; each said respective third
7 switch component being responsive to said output signal.

1 19. A method for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus; the method comprising the steps of:
4 (a) in no particular order:
5 (1) providing a first control circuit coupled with said input voltage supply
6 locus; and
7 (2) providing a second control circuit coupled with said first control circuit
8 and coupled with said amplifier device;

9 (b) operating said first control circuit to generate an output signal when said
10 supply voltage decreases below said predetermined value; and
11 (c) operating said second control circuit to effect said compensating in response to
12 said output signal.

1 20. A method for compensating operating current in an amplifier device when supply
2 voltage to said amplifier device decreases below a predetermined value at an input
3 voltage supply locus as recited in Claim 19 wherein said amplifier device comprises a
4 plurality of amplifier units.